

Title (en)
Chemically inducible expression of biosynthetic pathways

Title (de)
Chemisch induzierbare Expression von Biosynthesewegen

Title (fr)
Expression inductible chimiquement de voies biosynthétiques

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Application
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Abstract (en)
[origin: WO2006101983A2] Methods and constructs for the introduction of multiple genes encoding enzymes in a multi-enzyme biosynthetic pathway are provided. In one embodiment, the constructs contain two or more enzyme-encoding genes, each under the control of an inducible promoter and each with a polyadenylation signal. The constructs are used to produce transgenic plants, in which the expression of the enzymes are increased when a chemical inducing agent is applied, and a biosynthetic product of the series of enzymes encoded by the transgenes is produced. Constructs may be used which contain two or more enzyme-encoding genes under the control of one or more promoters activated by activator molecules or complexes expressed from a transgene or transgenes, which are themselves under the control of one or more inducible promoters and switched on following the external application of a chemical. The transgene or transgenes expressing the activator molecules or complexes may be included in the same construct containing multiple genes encoding enzymes in a multi-enzyme biosynthetic pathway. Alternatively, the transgene or transgenes expressing the activator molecules or complexes may be on a different construct from the construct containing multiple genes encoding enzymes in a multi-enzyme biosynthetic pathway. The activator molecule can be expressed using a constitutive promoter in an inactive form which is converted to the active form following application of the chemical inducing agent.

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